

ROCKS and MINERALS

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ROCKS and MINERALS

PEEKSKILL, N. Y., U. S. A.

The Official Journal of the Rocks and Minerals Association

GILBERT HART — *Geologist*

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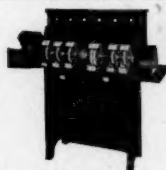
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ROCKS and MINERALS

Edited and Published by Peter Zodac

**PUBLISHED
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The Official Journal
of the
Rocks and Minerals
Association

VOL. 11, No. 3

WHOLE No. 57

Two-Thirds of Nation's Wealth Comes from Minerals

Millions Depend on Mineral Industries for Livelihood—Significant Statistics
Cited by Bureau of Mines.

Of the entire wealth of the United States (conservatively valued in 1932 at more than 163 billions of dollars) between 60 and 70 per cent had its origin in the mineral industries, announced Dr. John W. Finch, Director of the Bureau of Mines, Department of the Interior, in a recent address.

Since the beginning of the 19th Century, our country has produced more than 1 billion ounces of gold, about 12 billion ounces of silver, 40 billion pounds of zinc, 100 billion pounds of copper, and 136 billion pounds of lead. It ranks first in the world in lead, zinc, and copper output and in the consumption of metals of all kinds. Nonferrous metals, however, represent scarcely one-fourth the value of our mineral output; the balance is supplied by iron, coal, oil, and non-metallic minerals. Our share in the consumption of the World's pig iron was 47 per cent, of coal 37 per cent, and of petroleum 75 per cent. To keep step with an expanding industrial life—until the depression hit us—our mineral output increased in annual value by 77 per cent in the last quarter century, whereas farm production rose only 17 per cent.

Moreover, the wealth won from Nature by our miners does not vanish into thin air, Dr. Finch pointed out. It endures and thus affords substantial

additions to the Nation's accumulating store of wealth. Except for the fuels, which like food are promptly destroyed by use, our metals and industrial minerals are transformed to an important extent into facilities—buildings, highways, bridges, railroads, power transmission and communication lines, water sewage and drainage systems—that render useful service year after year. Even the metals that go into relatively temporary uses, such as machines and tools or utensils, after they have outlived their usefulness in factories, farms, and homes, come back as scrap to be refabricated and used over again. This return of scrap iron, steel, lead and copper is one of the big problems confronting primary producers, but our revolving fund of metals is a national asset of no mean importance. The accrued value of steel and the chief nonferrous metals that have entered as raw materials into permanent or recurring use in the United States since 1800 will aggregate in excess of 60 billion dollars and it would be safe to say that 50 billion dollars worth of this is still in use.

For 10 years before the depression, the minerals that we produced were worth, on the average, 5½ billion dollars a year. Metals and nonmetals, the mineral products that contribute most to building up our permanent stock of



lasting goods, represented nearly one-half of this total with coal and petroleum products, the energizing elements of our modern life, making up the balance.

Value figures for our mineral production, sizable though they are, as usually reported, fail utterly to reveal the real importance of minerals or the prominent parts they play in our industrial commerce. Mine products are raw materials and by the time they actually enter into use their value is enhanced many fold. For example, iron ore may sell for \$2.50 a ton but when two tons of it, say \$5 worth, are made into steel, the value increases to between \$30 and \$100, perhaps \$60 on an average, before it even leaves the steel mills as a raw material for manufacturing industries. Further fabricated into an automobile, its worth grows to \$500 or more and perhaps some of it may be fashioned into a watch spring worth 2 billions of dollars a ton. The further a mineral raw material gets from the mine, whether in degree of fabrication or physical distance, the more its value grows. To make the value grow, however, more work has to be done upon it or it has to be carried by train, truck, or ship to some other place.

Products of mines and crude oil afford well over one-half the tonnage of revenue freight handled by our railroads and if we add to this the tonnage from smelters and refineries and the products of cement, lime, and brick works, we would find a huge traffic indeed. Even casual analysis will show that the wages and dividends paid in many industries would disappear from our national income were it not for the mineral raw materials that furnish the broad basis of their employment.

In normal times, at least a million men work in our mines and quarries and the mineral industries give direct employment to 1,700,000; around 800,000 of them actually work underground. This is a fairly large payroll but it gives scarcely a hint as to

the number of people who depend upon the mineral industries for their livelihood. Even though we consider that the miners have families at least as large as the average American family of 4.3 persons, say 7,500,000 altogether, we still fail to grasp the significance of our mining population in national affairs. Wholly apart from the fundamental but rather intangible fact that a continued flow of essential minerals must be maintained to preserve our national and industrial integrity, people are beginning to learn that the mining industries provide the real source of subsistence for a very large and representative cross section of our population.

A striking reminder of the relative importance of the mineral industry in the National economy is afforded by a recent survey, summarized in a readable little pamphlet entitled "What Mining Means to Utah" and sponsored by the Salt Lake City Chamber of Commerce, which shows that more than 10 people are employed more or less directly to serve one miner. In addition, the labors of nearly 4 more are required on farms to grow the food for those that depend, in the first instance, for their livelihood on one man employed directly in winning minerals from the ground. This painstaking and thorough study of the economic dependence of the population of the State upon its mineral raw materials revealed that in Utah, while only 70,000 mine employees and their families were directly dependent upon mining in 1930, they were served by an army of 173,000 others nominally dependent upon trade, manufacturing, service industries, and the professions; and that 38,000 farmers were engaged in growing the food required by these various classes of workers and their families. While less than 4 per cent of the population was on the mine pay rolls, over half the people of the State derived their economic subsistence from coal and metal mining within its borders.



Colorado Rhodochrosite

By ALLAN CAPLAN, Box 144, Boulder, Colo.

The interest in the beautiful pink and well crystallized Rhodochrosite from the rich gold mining district of Alma, Colorado, runs high. Unfortunately, the mine that produced these far-famed specimens has not been operating for a number of years. The writer has visited the locality to find the specimens very scarce. About 30 years ago, mine operators struck pockets lined with the fine one-half inch crystals of Rhodochrosite, crystallized quartz and pyrite groups; also associated in some cases with finely crystallized hubnerite. A couple of such fine pockets were purchased, years ago, by a now retired mineral dealer at a handsome figure. The specimens eventually found their places in the finest mineral collections of the world.

Another old-time producing locality of fine Rhodochrosite was the Georgetown mining district, less than a two hours ride from Denver. Few specimens from this locality have been seen by the writer; the finest specimen, however, is on display at the Colorado School of Mines at Golden. The color of this Rhodochrosite is somewhat inferior to the Alma variety, but the crystals are from an inch to an inch and a quarter in size, and in large, beautiful, clustering, crystal masses.

Other localities of specimen Rhodochrosite are the Grizzly Bear Mine of Ouray and the Empress Josephine Mine of Bonanza. The former locality produced rather small crystals of good color, occurring in white gold-bearing quartz. The Bonanza locality still produces Rhodochrosite, at present, as an ore of manganese. The color is

pale, and crystals are about a quarter of an inch in size, often coated with black manganese oxide. Occasionally, interesting specimens are found associating with fine green fluorite; but in no way can the Rhodochrosite color compare with the specimens from the other districts.

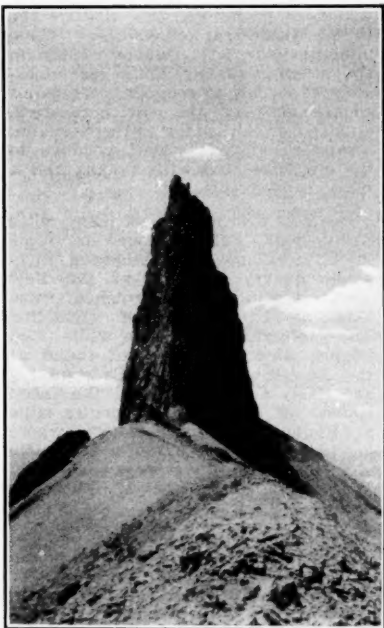


Photo by Seerley

Courtesy Colorado Mountain Club

Lizard Head, a volcanic neck in the San Juan Range, near Silverton, Colorado.

A Mineralogical Trip Through New England

By WILBUR J. ELWELL, Danbury, Conn.

After we had completed our mineralogical trip through Northern New York¹ last fall, we (T. Lipton Smith and the writer), felt that a similar trip through New England would wind out a very successful year for us. So accordingly we made hurried plans and just as we were about to start out, Mr. James F. Morton, Curator of the Paterson Museum, Paterson, N. J., called on us unexpectedly, learned of our proposed trip, and joined us. We were delighted in having him accompany us. Aside from being an eminent mineralogist, Mr. Morton also is a very courteous and jovial gentleman whose very presence is an assurance a mineralogical trip will be a grand success. So like the three Musketeers of old, we three mineralogists left Danbury early in the morning of Oct. 26th, for mineralogical worlds to conquer. We pointed the nose of the car northward, dumped in our paraphernalia, scrambled aboard, waved goodbye to the old folks, and with a bang and a roar—we were off.

Our first destination, not many miles away, was Falls Village or Lime Rock, in Connecticut, where a limestone quarry operated by the New York Gypsum Co., furnished some extra good specimens of tremolite. The mineral was snow-white and bladed, identical with that found at the New England Lime Co.'s quarry at East Canaan, Conn. We then shoved off for the old limonite mine at Richmond Furnace, Mass., where good specimens of limonite and gibbsite (richmondite) were collected. We spent the night at Pittsfield, Mass.

Pittsfield is a beautiful city of about 50,000 population. We would have enjoyed visiting its museum to see the mineralogical collection housed there, as we have heard it is a most remarkable one. But unfortunately we arrived late at night and

left early next morning, hours when the museum was tightly closed.

Second Day

Early next morning, greatly refreshed, we left Pittsfield, and headed east. First we stopped at an old talc mine at Cummington, Mass., where talc and good pyrite crystals were collected; the rhodonite locality at Plainfield, not far away, furnished fine specimens of the pink manganese mineral, also spessartite garnet crystals and fasciculite in schist, both of which were found in abundance. We searched in vain for cummingtonite. The rhodonite locality may be hard to find as it is on a poor dirt road which runs north off the Berkshire Trail. The Trail (Route 9), is left at Steele's Antique Shop, and the dirt road to left; going north and up hill, is taken; turn in at the first house on the left about a mile from the Trail. The pits of the rhodonite mine begin about 200 feet to the left of the house; the pits are small and in open fields.

The Barrus farm, at Lithia, a few miles further to the east, was our next destination, where beryl (goshenite) and good spodumene crystals were found in loose blocks alongside a small brook. We then headed southeast for Westfield, a small city of about 20,000 inhabitants and close to the Connecticut line, where we spent the second night.

Third Day

We did not have to go far, this day, to visit our first locality. It was on the outskirts of Westfield—the Lane's traprock quarry. The quarry was a large one, over a mile long, and working. A railroad line runs through it. Lane's traprock quarry is America's most famous locality for datolites; the largest and finest crystals are found here. The datolite occurs in a vein about two feet wide which dips at an angle and crystals as large as one's fist have been found here; good calcite crystals also occur here. (Incidentally, this was the writer's sixth visit to the locality and on each visit he has been fortunate in finding good datolites).

¹Elwell, Wilbur J. A. Mineralogical Trip Through Northern New York, *Rocks and Minerals*, Feb., 1936, p. 20.

We continued our journey southward, crossed the border into Connecticut and stopped at another traprock quarry in Tariffville. The quarry had not been working for some time so, unfortunately, we found nothing of interest. Added to the disappointment in not finding minerals, we had to part company with Mr. Morton—he had to leave us. His departure was deeply regretted. We then reversed our route, headed north again, went straight through Massachusetts and into New Hampshire where we spent the third night at a little village called Danbury.

Fourth Day

Near Danbury are garnet mines belonging to the Ford Motor Company of Detroit which we visited. The garnets resemble those of the Adirondack Mountains in New York. The next stop was at a new locality for graptomite and heterosite at the Palermo mica mine on Bald Face Mountain, $1\frac{1}{2}$ miles west of North Groton, N. H.; all we found were some good crystals of beryl. Another locality is near here called the Valencia mica mine where good crystals of heterosite pseudomorph after triphylite are said to occur. The mine is over a mile from the road and apparently hard to find—an old pulpwood road in very poor condition for a car was shown us as leading to the mine but we did not take it and the mine was not visited.

Our last stop for the day was at the

Ruggles feldspar quarries at Grafton, N. H., which are still working, where we found good crystals of beryl. The quarries are on top of a high mountain called John's Hill.

Again we spent the night at Danbury, N. H.

Fifth Day

This day was spent in sight-seeing. We drove around Lakes Sunapee and Winnepesaukee. A number of good mineral localities are scattered throughout the region but we made no attempt in visiting them. A good locality for graptomite is on the south side of Melvin Mountain, 5 miles west of Grafton Mt., at Grantham, N. H.; another is for yellow garnets and vesuvianites at Amherst, N. H., near Nashua. These localities are to be visited on our next trip as well as the gemmy rhodonite locality at Warwick, Mass.; the lead mines of N. Amherst, Mass.; and others.

The fifth night was spent in Greenfield, Mass.

Sixth Day

Only one and the last visit of the trip was made on this day and this to the old Bristol copper mine at Bristol, Conn., where just a few specimens of no special value, were collected. We then headed southwest, for Danbury and home, where we arrived without mishap late that afternoon. The total distance covered on the trip was 645 miles.

Rocks and Minerals Subscriber Honored

George C. Barclay, veteran jeweler of Newport News, Va., has recently been awarded a certificate in gemology by the Gemological Institute of America. Mr. Barclay thus becomes the only certified gemologist in Virginia, and one of only 15 in America, according to a statement of the Institute.

Mr. Barclay is widely known in Virginia and the southern states as an authority on gemology, mineralogy and geology. He has made numerous investigations of gold and other mineral deposits, and has done extensive geological research work. At his home he maintains a large collection of rocks, minerals and gems.

Mr. Barclay is a warm friend of ROCKS and MINERALS. He is a valued subscriber and advertiser, and has donated many fine specimens. He recently prepared an interesting article on the occurrence of fluorescent and phosphorescent calcite crystal shell casts in the Yorktown Formation of Virginia which shall appear in our next issue.

ROCKS and MINERALS takes great pleasure in extending its congratulations to Mr. Barclay on his recent achievement. We hope and trust that as time goes on, many more honors may be awarded him.

Some Gold Occurrences In South Carolina

By JOSEPH P. LINNEMAN

During the latter part of 1935, the writer spent about two months examining some gold occurrences in Oconee County, South Carolina. All of the occurrences had been worked, some long before the Civil War, but for many years they had been abandoned; now they are being reopened. Although some of the mines show promise of developing into active producers, the activities may be short-lived and the mines abandoned again.

Frederick Place

One of the most famous of the old mines is that on the Frederick place, seven miles southeast of Seneca. Two types of gold, lode and placer, occur here. The main placer deposit is in a wet branch (branch is a South Carolina term for a small creek) but the gold is in a very fine state. The writer spent a few hours panning the gravels and recovered from 15c to 50c worth of gold per pan. The gold bearing gravels extend for about one-half mile along the branch, (sometimes known as Mine Creek) and from the road to the Sullivan property line. A nearby hill contains a black colored vein, probably decomposed pyrite, which assayed \$57.51 per ton in gold. A number of shafts have been sunk in this vein. An old tunnel, of unknown length, has been driven in at the bottom of the hill to tap the vein. The tunnel is near the edge of a dam and the writer was able to penetrate about 300 feet into it; further in the tunnel was badly caved.

A number of small shafts have been sunk on the opposite side of the hill, in small veins which appear to be offshoots of the main vein. On the same side of the hill is a dry branch (dried up creek) in which coarse gold and small nuggets up to the size of a grain of wheat have been found. The two largest gold nuggets found were worth about \$6.50 and \$8.50 respectively and were found about two or three years ago near a leaning poplar tree. This property is now under lease to be worked.

A story is told about the Frederick place that long before the Civil War

a very rich gold mine was on the property and was worked by means of a long tunnel. During the war, to prevent capture of the mine by Northern troops when they were in the neighborhood, the entrance to the mine was completely obliterated by blowing down sections of the surrounding rock and purposely burying alive a number of negro miners to prevent them from later giving out information. This tunnel has never been found.

Lay Place

About 24 miles northwest of the Frederick place or 10 miles northwest of Walhalla, is the old Lay place. On this property is a placer washing approximately 300 feet long, 40 to 50 feet wide and about 15 feet deep. The gold occurs in a reddish sandy soil mixed with small fragments of slate. Much gold has been taken out of this placer and it is by no means exhausted as the writer panned two pieces of about 4 grains each.

Reese Place

The best lode mine in the district is on the Reese place which adjoins the Lay place on the northwest. The mine has been worked by means of three tunnels, two of which are filled up with water and no longer accessible but the third can be entered; the longest tunnel is about 500 feet in length. A section at the mouth of the third tunnel shows, from the top down: shale, shale and quartz (gold bearing), white sand (gold bearing), reddish clayey sand, and slate. The shale and quartz vein is the richer but sometimes the reddish clayey sand also shows gold which may be due to particles dropping down from the veins above.

Some pieces of quartz seen by the writer look as if the gold had been shot into it by means of a shot gun; this was natural ore and not "salted" and came from the inner workings. During the past year considerable work has been done at the mine and ore taken out from near the middle of the mine assayed \$84 per ton.

Moody Place

The Moody place adjoins the Reese place on the northwest. Remnants of old placer workings are all that is visible.

Schumacher Place

The Schumacher place adjoins the Moody place on the northwest. A large placer mine is here present which was recently worked.

Lode mining was also carried on here in the past, long before the Civil War, as in the old timber sets in the tunnels many square-headed nails are still to be seen. A gold-bearing quartz vein was worked but evidently it was not rich enough to make mining profitable.

This was the last of the mines examined.

Conclusion

All these districts contain gold but whether the ores are rich enough to work is the question. Furthermore there is the possibility that other gold veins, as yet uncovered, may be found in the areas.

An exhibit illustrating the destructive action of the sun's rays upon rock has been added to the geological collections in Clarence Buckingham hall at Field Museum of Natural History. This destructive action is especially evident in western Iraq and Transjordan where most of the specimens shown were collected by Assistant Curator Henry Field, leader of the Marshall Field North Arabian Desert Expeditions.

The destruction by insolation or exposure to the influence of the sun's rays is greatest in regions where the sunshine is hot, and where there is a great difference between the temperature of day and night, states Henry W. Nichols, curator of geology. Naked rock surfaces are strongly heated when exposed to the sun's rays, and they cool rapidly by radiation at night. The rock surface expands when heated and contracts as it cools during the night. The strains due to continual expansions and contractions often become greater than the rock can bear, and fragments break away in the form of sand, gravel and chips. Insolation is especially marked on exposed mountain peaks where in the rarefied atmosphere the heating effects of the direct rays of the sun are great and



Photo by Long

Courtesy Colorado Mountain Club

Climbing on the Block Tops. Gilpin Block Tops, a dissected plateau in the San Juan Range, Colorado

the cooling at night extreme. Much of the loose rock which mantles the tops and slopes of such peaks is due to insolation as well as to the action of frost.

The American Mineral Exchange, of 212 Pacific Avenue, Houston, Texas, have recently adopted a new system of pricing minerals. The system is rather unique and its purpose is to simplify the listing and pricing of specimens. The system is centered around a Price Rate Card on which prices are quoted for 13 sizes of specimens and 14 grades of quality. The sizes vary from $\frac{1}{4}$ inch up to 6x6 inches; the grades vary from Class 00 (the best) to Class 12 (the poorest). A $\frac{1}{4}$ inch specimen Class 00 is priced at 50c; Class 12 at 5c. A 6 x 6 inch specimen Class 00 is priced at \$30.00; Class 12 at \$1.00.

Mineral lists giving localities and classification numbers are furnished with each Price Rate Card.

Norwegian Mineral Collecting Tour

Sponsored by ROCKS and MINERALS

The object of this trip is to give to students of Mineralogy and collectors the opportunity of visiting the famous mineral localities of Norway for the purpose of studying and collecting the minerals found there. These localities, although well known to European collectors, are remote enough from the beaten track to repay any effort made to reach them. With the co-operation of the authorities in charge, it will be possible for this group to collect and ship home all the specimens they may find. At the same time ample opportunity for sightseeing will be given and the group will see a good bit of Norway's famous scenery en route. As shown in the itinerary, the average stop is three days at each place, which allows time enough for following one's own inclinations.

Richmond E. Myers, who will conduct the group, has traveled extensively in various parts of the world collecting minerals. He has visited Norway several times, and covered this same ground last summer on a collecting trip. He has written several articles dealing with Mineralogy which have been published in "ROCKS and MINERALS" sponsoring the tour. An article on "Mineral Collecting in Norway" by Mr. Myers appeared in the January, 1936 issue. During the past five years Mr. Myers has taught in the High School of Long Beach, New York, where he is the head of the Economic Geography Department. Mrs. Myers will accompany the group.

Equipment

Whatever you usually use for field clothes should be satisfactory. Needless to say, good waterproof shoes or rubbers are essential. A raincoat is a necessary item, something light that can be easily carried. Although warm weather may be encountered, it is best to have warm clothes. for the nights are cool, and often a top coat feels comfortable.

It is suggested that members supply themselves with canvas collecting bags, with drawstrings, about 14" x 6½". These may be secured for about ten

cents each from the Bemis Brothers Bag Company, 51st Street and 2nd Avenue, Brooklyn, New York. When filled, they may be tied and sent by mail—to the boat on which the group will return to the United States. The cost of mailing is not high. About one dozen bags should be sufficient. More may be used if desired.

Dark glasses will be found handy at times. A leather loop placed on your belt to carry your hammer will be useful.

The Itinerary

July 4—New York—Sail at noon on the SS BERGENSFJORD of the Norwegian American Line.

July 12—Bergen—Due.

July 13—Bergen—Sightseeing.

July 14—To Finse—Lv. Bergen 8:00 A. M. by rail, Ar. Finse 1:25 P. M.

July 14 and 15—Finse—1 day inspect glacier.

July 15—To Oslo—Lv. Finse 1:25 P. M. by rail, Ar. Oslo 8:10 P. M.

July 16 through 18, 3 days—Oslo—Sightseeing and study of mineral collection in the University Museum.

July 19—To Kongsberg—Lv. Oslo 8:00 A. M. by rail, Ar. Kongsberg 10:01 A. M.

July 19 through 20, 2 days—Kongsberg—Visit to the Silver Mines in the vicinity.

July 21—To Larvik—Lv. Kongsberg 10:20 A. M. by motorbus, Ar. Larvik 2:30 P. M.

July 22 through 23, 2 days—Larvik—Visits to nearby quarries for Larvikite.

July 24—To Kragero—Lv. Larvik 6:30 A. M. by steamer, Ar. Kragero 10:30 A. M.

July 24 through 26, 3 days—Kragero—Collecting in the Feldspar Quarries in the vicinity, by motor.

July 27—To Arendal—Lv. Kragero 10:30 A. M. by steamer, Ar. Arendal 2:30 P. M.

July 28 through 30, 3 days—Arendal—Collecting in the vicinity, by motor.

July 31—To Evje—Lv. Arendal 9:45 A. M. by motorbus, Ar. Evje 1:20 P. M.

Aug. 1 through 2, 2 days—Evje—Collecting in Evje Nickel Mines and Feldspar Quarries.

Aug. 3—To Kristiansand—Lv. Evje 11:49 A. M. by train, Ar. Kristiansand 2:00 P. M.

Aug. 3—Kristiansand—Sightseeing.

Aug. 4—Kristiansand—Sail at 10:15 P. M. on the SS STAVANGERFJORD of the Norwegian American Line.

Aug. 5—Stavanger—Optional shore excursion. Then along the fjords to Bergen.

Aug. 6—Bergen—Optional shore excursion.

Aug. 13—New York—Due.

Rates and Services

New York to New York—\$382

The Rate Includes—Roundtrip steamship passage Third Class on the Norwegian American Line, Eastbound on the SS BERGENSFJORD from New York to Bergen, Westbound on the SS STAVANGERFJORD from Kristiansand to New York; the U. S. Revenue Tax of \$5.00 and European port taxes where required; all transportation abroad from port of arrival to port of departure by Third Class rail, local steamers, motorbuses and private motor cars in Kragero for two days and in Arendal for two days;

lodging throughout in simple hotels, pensions and inns, with perhaps an occasional club; three meals daily in accordance with the custom of the country; informal sightseeing program in each city visited as time permits; including entrance fees to museums, exhibitions, fairs, etc.; the services of local and national guides; all expenses in conjunction with the pre-arranged special interest and social program; service charges in hotels; transfers and portage of one large suitcase per member (approximate size 28x15x10 inches).

The Rate Does Not Include—The American passport (\$10.00); tips on trans-Atlantic steamers; steamer chairs and rugs if wanted; transfers and portage of excess luggage; beverages, baths, laundry and other personal expenses. No European visas are required.

While the rate of \$382 includes roundtrip steamship passage in Third Class, Tourist Class accommodations may be secured at an additional charge of \$49.00.

The Open Road, 8 West 40th Street, New York, is in charge of travel and business arrangements.

For further information, address: Richmond E. Myers, 222 E. Union St., Bethlehem, Penn.

Petrified "Teredo" Wood Near Roseburg, Oregon

By J. R. WHARTON

A recent find near this locality were some large pieces of petrified wood which had been bored full of holes by teredoes (marine worms) while the wood was still in its original stage. Later the holes became filled up with "mud" and the whole mass turned into stone. The wood part is jet-black in color, showing the grains well, and while not exceptionally hard will take a good polish. The filled holes are dark-gray in color and are often surrounded by a white ring of some mineral, shell, or a deposit left by the worm and which shows plainly on polished surfaces.

One of the specimens found weighed 290 pounds; another over 500 pounds. The occurrence is in the bed of the

North Umpqua River, twenty-two miles east of Roseburg, Oregon. This point is one hundred miles inland from the present shore of the Pacific Ocean. The specimens were found attached to the old ocean bed layer of sandstone. In other layers close to the occurrence, thick shells of petrified clams and oysters were common. Small pieces of teredo wood were also found near the locality as nuclei of limestone concretions.

During recent years, a few small loose pieces of petrified teredo wood have been found along the Oregon coast but the size of the above specimens and the fact they were imbedded in the old original sea bed layer makes their "find" of special interest and importance.

Minerals of the District of Columbia and Vicinity, With Pertinent Bibliography

By DR. TITUS ULKE

PART THREE—Conclusion

ADDENDA and CORRECTIONS

Carrollite, same as **Linnaeite**.

Fluorite. Found at Shepherdstown, W. Va.

65. **Prehnite**.

With stilbite as an incrustation on diabase in the Goose Creek Traprock Quarry near Leesburg, Virginia.

66. Prochlorite. Chlorite, in part. Clinoclhor. Penninite. Owenite.

On the surface in narrow veins in the amphibolite near the mouth of Foundry Branch, Georgetown, and in float near Black Pond, Virginia. Considerable quantities were taken from the Waterworks tunnel and in various shafts connected therewith from Howard University to Rock Creek, mostly associated with epidote rock. On Foundry Run the associated minerals are actinolite or a very dark green hornblende, a yellowish-gray mineral believed to be zoisite, pyrite, tourmaline and rutile. Prochlorite in that locality occurs in the form of a compact aggregate of small, irregularly shaped green scales, each 1 to 2 mm. in diameter, and with a specific gravity of 2.85. It was found to contain approximately 25.5% SiO_2 , 18% Al_2O_3 , 15% MgO , 25% FeO , 0.7% Na_2O and 14.5% H_2O . Chlorite schist occurs near a contact of gabbro and soapstone lenses on the Virginia shore opposite Cabin John. In a vein near New Cut road, prochlorite is found associated with epidote, massive quartz and ilmenite (see Bibl., Merrill, B).

67. **Psilomelane**.

With pyrolusite in seams of altered granite near Falls Church, Virginia.

68. **Pyrite**. Iron Pyrites.

Pyrites was found by Merrill associated with hornblende, zoisite, prochlorite, tourmaline, rutile and quartz on Foundry Run. It frequently occurs in the locally mined gold ores near Potomac and Great Falls, Virginia. Pyrite in large cubes, 1 to 2 inches square, with prochlorite, has also been found in gneiss in the District, and in granite

at Glen Echo, Maryland. It is frequent in the stone quarries below Chain Bridge, Va.

69. Pyrolusite. Black Oxide of Manganese.

Common as reniform coatings and dendrites in seams of altered granites and gneisses in the District; near Point of Rocks, Frederick Co., Md. Once mined near Brookville, Montgomery Co., Md.

70. Pyroxene. Diopside. Diallage. Augite.

Next to feldspars, the most universal constituent of igneous rocks, especially those containing little or no free silica. Found in the vicinity of Washington in gabbro, and with labradorite in diabase; sometimes in loose water-worn pebbles.

71. **Pyrrhotite**. Magnetic Pyrite.

In small quantities with hornblende near Woodstock, Howard Co., Md.

72. Quartz. Vars. Agate, Chert, Chalcedony, Moss Agate, Jasper, Flint, Amethyst, Rose and Smoky Quartz.

Common almost everywhere as a component of gneiss, granite, sandstone and gravel or as vein quartz. Practically all the above mentioned varieties of quartz are represented in the Indian artifacts found about Washington. Silicified wood occurs in the Cretaceous beds on the Catholic University campus and near Howard University and in the Aqueduct Tunnel on Virginia Avenue. A fine agate was obtained in the gravels at Takoma Park recently and a beautiful piece of variegated jasper was found by the author in Northwest Branch, Md. Moss agate was found near Bare Hills, Md.

72A. Remingtonite. Found as an incrustation on serpentine at Mineral Hill, Md.

73. **Rutile**.

In 1883 the writer discovered a number of beautiful prismatic crystals, dark blood-red in color, 2 to 4 inches long by $\frac{3}{4}$ to $1\frac{1}{5}$ inches wide, of the crystal formula O-OP. mP mPO-O , in a translucent colorless quartzite rock

near the mouth of Foundry Run, Georgetown. Subsequently Dr. Merrill secured there a mass of prochlorite containing rutile associated with hornblende, zoisite, pyrite, quartz and tourmaline. (See Bibl., Merrill, C). In the Foundry Branch Shaft rutile was found with actinolite, prochlorite and quartz.

73A. **Sepiolite** Meerschaum. Found at Bare Hills, Md.

74. **Serpentine**. Var. Asbestos, in part. **Baltimorite**.

In lenses $1\frac{1}{2}$ miles west of Bethesda, near gabbro and metagabbro, and at Ammandale, Virginia, and on the Virginia shore of the Potomac, opposite Cabin John, associated with soapstone and diorite. Quarried at Bare Hills and Reistertown, Baltimore Co., Md., occasionally with fibrous serpentine or asbestos.

Baltimorite occurs at Bare Hills, Md.

75. **Siderite**. Chalybite. Iron Carbonate. Var. **Sphaerosiderite**.

In the gangue of the Kirk gold mine above Great Falls, Maryland. Scattered masses of siderite, occurring in the Potomac clays, were formerly worked in the sand hills east of Branchville, Maryland. The variety **Sphaerosiderite** occurs in brownish-black globules with quartz on gneiss in Harris' Quarry near Baltimore.

76. **Silver**. Native Silver.

In sphalerite and galena at Catoctin Furnace, Frederick Co., Md.

77. **Smithsonite**. Zinc spar.

Often with sphalerite or calamine at Shawsville, Montgomery County, Virginia.

78. **Sphalerite**. Zinc Blende.

Sphalerite and galena on quartz were collected at Glen Echo, Montgomery County, Maryland. In crystalline limestone in Carroll Co. (west part), and Frederick Co. (east part), Md.

79. **Spinel**. **Gahnite** (zinc spinel or Automolite.)

A large loose black crystal of gahnite was reported found many years ago near the Kensington Mica Mine, Maryland. A blue spinel was obtained at Sykesville, Md.

80. **Staurolite**.

Occurs in schist with cyanite near Chain Bridge, Va.

81. **Stibnite**. Gray Antimony Ore. Obtained in Middletown Valley, Frederick Co., Md.

82. Stilbite

Commonly forming a thin coating of radiating blades on joint surfaces of both the hornblende and micaceous rocks of the District. Occasionally in small rectangular prisms implanted upright on thin layers of calcite, usually but a few millimeters in length and of faint yellowish color. Some crystals 15 millimeters in length and diameter were obtained in a narrow vein of calcite in amphibolite, 1,250 feet west of the eastern end of the Waterworks Tunnel near Howard University. (See Bibl., Merrill, B). It is found, associated with prehnite, datolite and laumontite, in deposits along fissures in diabase, in the Goose Creek Traprock Quarry, Virginia.

82A. **Succinite**. Amber. Occurs at Cape Sable, near Magothy River, Md.

83. Sulphur.

Said to occur as impregnations in gray compact limestone (Dana) 25 miles N. of Washington, D. C.

84. **Talc**. Steatite. Soapstone. Saponite.

Soft talc, i.e., soapstone, is found in blocks or lenses near the contact of metagabbro and diorite on the Virginia shore of the Potomac opposite Cabin John. A fine and compact light blue-gray soapstone was obtained on W. W. Evans' land, north of Woodley Lane Road, in 1886. Formerly occurred in this city at Albermale St. and Connecticut Ave., N. W., where Indians used it for making pot stone bowls. Found also on Darnestown road, 6 miles from Rockville, Md.

85. **Tetradymite**. Bismuth Sulphotelluride.

Impregnated or in granular aggregates in the gold mines of Fluvanna County, Va., and at Whitehall, Spotsylvania County, Va. Has been mined with gold in the Great Falls Mine in Montgomery Co., Md.

86. Titanite. Sphene.

Embedded in prochlorite as wedge-shaped, brittle crystals up to 2 cm. in greatest diameter, of a yellowish-green color, quite clear and semi-transparent. I found small wedge-shaped brown crystals thinly scattered through a porphyritic granite boulder in the valley of Piney Branch.

87. Tourmaline. Schorl.

Occasionally obtained locally in boulders with quartz forming schorl rock (schorlyte), but usually as small

acicular crystals penetrating the quartz. Sometimes found here in radiating thin rod-like forms on diorite or amphibolite, in curved trigonal prisms 4 to 5 mm. in diameter, embedded in prochlorite, as a very fine granular aggregate or rods in quartz veins, and more rarely in columnar crystals of rather considerable size in the quartzose portions of amphibolite or penetrating calcite (see Bibl., Merrill, B.). Black tourmaline (schorl) in finely granular masses was obtained 114 feet below the present surface in the Waterworks Extension Shaft east of Howard University. The writer obtained a fine crystal of black tourmaline, 1/3 in. in diameter, on pegmatite at Sandy Landing, below Great Falls, in Virginia. Chrome Tourmaline was found near Etchison in Montgomery Co., Md.

88. Turgite

In compact ochreous layers, associated with bands of limonitic sand on the grounds of the Catholic University at Brookland; also at Kenilworth, Maryland.

89. Vivianite. Blue-Iron Earth.

Frequently observed as light sky-blue streaks, or as indigo-blue crystal aggregates, often globular or columnar and incrustated with limonitic sand, commonly in deep alluvial clay, about Washington. (See also Bibl. Benn).

90. Wad. Bog Manganese.

The writer found wad filling vugs and as incrustations along seams in an altered felsitic granite, on quartz and soapstone, near East Falls Church, Virginia.

91. Zoisite.

A yellowish-gray finely granular crystalline mineral, occurring in a mass of scaly prochlorite, and associated with hornblende, pyrite, quartz, schorl and rutile, was believed by Merrill to be zoisite (see Bibl., Merrill, C.). Darton and Keith, on page 3 of their text to the Washington Folio of 1901, state that zoisite, associated with epidote, garnet and rutile, appears in the final stages of alterations of our local gabbro and metagabbro rocks.

Bibliography

Darton, N. H.—Keith, Arthur—*Geologic Atlas of the United States*. Washington Folio, with Text, Washington, D. C., January, 1901.

Merrill, Geo. P. (A.)—"Disintegration of the Granitic Rocks of the D. C." *Geol. Soc. Am. Bull.* 6, 321-322 (1895).

Merrill, Geo. P. (B.)—"Notes on the Mineralogy and Lithology of the D. C." *Proc. U. S. Nat. Mus.*, 8, 351-353 (1885).

Merrill, Geo. P. (C.)—"On Prochlorite from the D. C." *Proc. U. S. Nat. Mus.*, 6, 67 (1884).

Wherry, Edgar T.—"The Geology of the D.C. as related to the Flora." *Journ. Acad. Sci., Wash.*, 7, 435, 1917.

Dana, Edward S.—"The System of Mineralogy of James Dwight Dana," 1837-1868. Descriptive Mineralogy. 6th Ed., New York, 1896.

Riemann, Carl—"Taschenbuch für Mineralogen." Berlin, 1887.

Shannon, Earl V.—"The Mineralogy and Petrology of Intrusive Triassic Diabase at Goose Creek, Va." No. 2539, *Proc. U. S. N. M.* Vol. 66, 1924.

Benn, James H.—"Notes on the Occurrence of Vivianite in the D. C." *The Am. Mineralogist*, vol. 20, No. 4, April, 1935.

Ulke, Titus—"Ankerite from Bethesda, Maryland." *The Am. Mineralogist*, Vol. 18, No. 7, July, 1933.

Naumann—Zirkel—"Elemente der Mineralogie." 12th Ed., Leipzig, 1885.

Eakle, Arthur E.—"Mineral Tables." New York, 1907.

Weisbach, Albin—"Synopsis Mineralogica." Freiberg, Saxony, 1875, 2d Ed. 1884.

Collins, J. H.—"A First Book of Mineralogy." Putnam's Sons, New York, \$1.00.

Ford, William E.—"Dana's Manual of Mineralogy." New York, 1929, 14th Ed. Price, \$4.50.

Tarr, W. A.—"Tables for the Determination of the Common Minerals and Rocks." Lucas Bros., Columbia, Mo., 1924.

Schrader, Frank C.; Stone, Ralph W.; and Sanford, Samuel—"Useful Minerals of the United States." *Bull.* 624, U. S. Geol. Survey (1917) pp. 153-157.

THE AMATEUR LAPIDARY

Conducted by J. H. HOWARD*

504 Crescent Ave., Greenville, S. C.

Amateur and professional lapidaries are cordially invited to submit contributions and so make this department of interest to all.

*Author of—*The Working of Semi-Precious Stones, and Handbook for the Amateur Lapidary.*

Where There's a Will There's a Way

By MARK M. FOSTER

The recent panic found me idle and penniless. The monotony of doing nothing, day after day, almost drove me mad until finally I got a grub-stake job prospecting for gold in west central New Mexico. While probing the trackless wilds, I found ever so many beautiful and interesting mineral specimens and hardy a day passed that I did not land in camp with about all the rock and mineral specimens for testing that I could lug—part of the time the soles of my feet exposed to the ground and often to snow and ice, but all the while “as happy as if I had good sense.” I gave many fine specimens to friends; also kept many.

In 1932, a good friend gave me the March 1932 number of *Scientific American* and called my attention to Mr. J. H. Howard's article on cutting semi-precious stones. I simply devoured this interesting article. Later, by many untold sacrifices, I managed to get together \$1.00 as payment for a copy of Mr. Howard's monograph, *The Working of Semi-Precious Stones*. This fascinated me and I longed for equipment described by Mr. Howard so as to polish some of my many specimens. But alas, how hard it was to earn enough money to just exist—without exchanging some of it for equipment.

Finally, after much experimenting, I began to shape cabochons on a fine-grained corundum stone, such as is used by carpenters for grinding edge tools. I got some rough cabochons fairly well shaped, but—how to pol-

ish them? I had a small fine grained carborundum pocket-knife stone. I tried it for polishing. It was good for taking off rough corners left after grinding but still the cabochons would not shine. I was not able to buy the different carbo grains, pumice and tin oxide, as recommended in the Monograph, so, alas—a dozen rough cabochons and no way to polish them. At last a happy thought struck me.

I remembered that once while scouring windows, I observed that a scratch in the glass was completely obliterated with Bon Ami scouring powder. I made a vice with two pieces of 1x2 inch white pine slats hinged together at the bottom, a hole bored through their center to take a $\frac{3}{8}$ "x3" bolt (round head, square shoulders) and wing nut to act as vice screw. The back slat I fastened to the woodshed wall. I got a tin pie plate to hold the Bon Ami. After clamping a stone securely to the vice, I tore up strips of blue denim overalls, about one inch wide, moistened one with water, and rubbed it into the pie tin of Bon Ami, then I grasped each end of the strip and started a brisk brushing motion over the cabochon, like a bootblack uses in shining your shoes. Imagine my surprise when the stone took on a sparkling luster. I found it necessary to clamp the stone in the vice in several ways, i. e. first edgewise, crosswise, and then one edge up—then the other. I also discovered that it is after the cloth becomes fairly dry that stones begin to polish. After much experimenting, I found best re-

sults were obtained if the following procedure is carried out:

First saturate the cloth strips thoroughly in water, squeeze out the water, roll and rub into the Bon Ami until you get the strips charged to the utmost with the powder. If the cloth wants to double or twist while polishing, allow it to do so. I found it necessary to twist the Bon Ami charged strip into a cord in order to polish the hardest stones; also that muslin or soft cloth is needed in lieu of 8 oz. denim on softer stones.

Later, after further experimenting, I was able to cut many hard stones as jasper, agate, and others—and recently a fine fire opal (obtained from Seward of Australia) by the following method:

I mix a half and half paste of carbo grains 150 and clay flour on a smooth 1"x6" board 8" long. I place this board on a bench or table the right

height to sit conveniently and comfortably in a chair. I set a pan of water on the bench, to my left, the cans of carbo and clay flour, to my right. I place the stone on the 1x6x8" board directly in front of me, dip a case knife in the paste, and saw the stone in two, with the back of the case knife. As the paste dries and thickens, dip your fingers in the water at your left and let a few drops fall on your "palette," scrape all paste into a fresh mound and start sawing again. If the carbo wears dull, add more carbo and clay flour to the board.

I'll guarantee that if you are shut in because of bad weather and are burned out hearing the radio, playing cards, or reading, that once you cut and finish a stone by this process, you will be so proud of it that you will "catch the bug" and won't let up until you build up a collection of polished rocks and minerals.

Recent Finds of Interest

Orbicular Jasper in California

Some few years ago, Mr. William B. Pitts of Sunnyvale, Calif., (a subscriber to "ROCKS and MINERALS") made an interesting find of orbicular jasper. The specimens took a beautiful polish, and being unique, soon were in keen demand by collectors. Unfortunately, the material was in limited amount and occurred as loose pebbles and small boulders in Llagas Creek bed, about 7 miles northwest of Gilroy, Santa Clara County, Calif.

Another subscriber, Mr. Wilfred C. Eyles, 36 Fountain St., San Francisco, Calif., had strong reasons for believing that the jasper would, with search, be found outcropping in the area. This view was shared with by Mr. A. Hughes of Palo Alto, a friend of Mr. Eyles. Together the two friends searched diligently for many months, and at last were rewarded. The outcrop was found hiding in the creek bank about half a mile further up-

stream (from the spot where Mr. Pitts made his discovery) and completely covered. How much jasper is available has not yet been ascertained but many large pieces have been extracted; the largest weighed about 30 pounds each.

Later investigations exposed jasper as a vein 10 feet wide running into a small hill that is probably 200 feet high; the jasper was also discovered outcropping on the opposite side so the vein evidently runs through the hill.

The formation not only includes orbs (hence the name "orbicular") but striations of every conceivable color. It of course cuts and polishes well and is said to be the most beautiful jasper known.

Mr. Eyles is a Member of the Northern California Mineral Society of San Francisco and is employed at the Division of Mines, Ferry Building, in his city.

Club and Society Notes

Canon City Geology Club

"Down to bedrock," is the slogan of the club this year. It was re-organized in September with a personnel of 20 members that has increased to 31. Its headquarters is in the Canon City High School, Canon City, Colo.

No undertaking is too arduous for this group of adventurers in the mysteries of earth history and the all mighty forces of the structural agencies of world building. Under the leadership of Billie Lindsey, as president, and Ardeth Colson, as secretary, a project has been planned by which specimens of the various kinds of country rock

that outcrops so abundantly in the Canon City Embayment can be exhibited in classified order. In a case made for the display by Fred Jenkins are thirty-two compartments—one for each member of the club including the sponsor. The compartments are arranged in divisions entitled: igneous, sedimentary, and metamorphic.

After each member has contributed the required specimen the collection will be used as a master-key for further individual effort in identifying the most common rock formation of the countryside.

The club has adopted ROCKS and MINERALS as its official journal.

F. C. KESSLER, Sponsor.

Huge Star-Sapphire Acquired By Rocks and Minerals Subscriber

The STAR of ARTABAN, one of the largest Star Sapphires ever brought into America was recently purchased by the Wm. V. Schmidt Co., Inc., the House of Stones of New York City, one of ROCKS and MINERALS valued subscribers. This rare specimen, weighing 316.85 carats, is oval shaped with a flat base and is about the size of an ordinary hen's egg. It is translucent, of a fairly deep blue shade, and when viewed under direct light shows fine asterism—that is, it reflects the six star-like rays which are characteristic of these stones.

The huge corundum crystal was found a few months ago by a native in a Ceylon gem pit and in the rough state weighed over 1,000 carats but it was cut down to less than $\frac{1}{3}$ of its original weight in order to show its asterism, i.e. star effect, in its highest perfection. This Star Sapphire was first purchased in India by Samuel Mendelsohn, a member of N. Zaidens, Inc., diamond dealers of New York, who personally supervised its cutting in Ceylon and arranged for its shipment to the U. S. Its arrival on January 14th, 1936, has been widely heralded in the press and on the radio, and other mediums. Seldom has any stone received such spontaneous national attention as was accorded to the STAR of ARTABAN. Arthur Brisbane wrote an article on it in his famous column and such noted radio commentators as Edwin C. Hill have spoken of it over the air.

The STAR of ARTABAN was named in tribute to the character in Henry

Van Dyke's internationally known book "Other Wise Men" for it was Artaban who sold all his possessions to buy three stones to present to the infant Jesus—a Sapphire for truth, a Ruby for love and a Pearl for purity.

The Schmidt Company, prominent stone dealers, with offices at 22 West 48th Street, New York City—recently purchased the STAR of ARTABAN and are making arrangements to display it in various sections of the country. Announcement to the Jewelry trade from the Schmidt Company reads:

"When we read about the STAR of ARTABAN in the press—and arranged to see the stone, we were moved to purchase it, not only because of the profit and prestige which might accrue to the Schmidt Company from its ownership, but more especially for the benefit that all of us in the jewelry trade may derive from the creation and fostering of public interest in Star stones by its nation-wide display."

The STAR of ARTABAN was on display for two weeks in the famous "invisible glass" windows of Marcus & Co. on Fifth Avenue, New York where it aroused unusual interest and leading firms throughout the Country have swamped the Schmidt Company with requests to exhibit it in their stores. Thos. Long Company, drew such crowds to its store in Boston that they have requested permission for another display in May. The results achieved so far indicate public interest in Stars has been aroused to a point never reached before in America.

A PEEK AT OUR MAIL

Enjoys Reading "R. & M."

Denver, Colo.—I know I will enjoy reading **ROCKS and MINERALS** more in 1936 than ever before—because each year it becomes more interesting than the year previous—Daniel L. Bowen.

\$1.00 for Good Luck!

Claremont, Calif.—Enclose find check in the amount of \$2.50—\$1.50 for renewal plus \$1.00 for Good Luck—R. M. Colcord.

Good to Eat!

San Francisco, Calif.—Please find enclosed Money Order in the amount of \$3.00 of which \$1.50 is payment for renewal to **ROCKS and MINERALS** and the remaining \$1.50 payment for the attached ad. I also take pleasure in receiving the magazine monthly; it contains very interesting subjects which I digest from cover to cover.—Wilfred C. Eyles.

Glad to Renew

Portland, Ore.—I am very glad to renew my subscription to **ROCKS and MINERALS** for two years. I enjoy this little magazine very much—H. B. Schminky.

A Tribute to Mr. Howard

Casper, Wyo.—About a year ago, I purchased a second-hand lapidary outfit that was designed by Mr. Howard. I started to cut and polish agates as a hobby but it became so interesting and profitable, that I have practically quit all other endeavors. Furthermore, the Government, under the WPA, came to me with the request that I start a class in the polishing and cutting of semi-precious stones. I am now enrolling people for the class; this is remarkable in view of the fact I have had only about a year's experience.

Wyoming, as you may know, is the agate bed of the world. Agates are found here on almost every square mile. Everyone is interested in them and one of the pastimes of the people is to go out and gather agates. In the near future, I will try my best to obtain several contributions on agates for **ROCKS and MINERALS**.

Instead of going to Norway, to look for minerals, I would suggest the party would find it more interesting and profitable were it to come to Wyoming. Unbeknown, we have one of the most highly mineralized states in the Union; it is the least explored and developed.

I will use **ROCKS and MINERALS** along with my instructions in the classes, and will advise all pupils to subscribe for it.—W. B. Olson.

Acknowledgments

We wish to acknowledge receipt and express our sincere thanks for specimens and other donations recently sent us by some of our subscribers.

Waldru Lapidary Shop, Indianapolis, Ind.—A choice specimen of "Grape Stone" as advertised by them in the February issue of **ROCKS and MINERALS**. This interesting specimen comes from the Mohave Desert of California.

Wharton, J. R., Roseburg, Ore.—A choice polished specimen of "Teredo

Wood" as described in an article in this issue. The specimen is dark gray in color and very interesting. A photo of a 290 pound specimen was also donated.

Eyles, Wilfred C., San Francisco, Calif.—Five beautiful specimens of orbicular and paradise jaspers from near Gilroy, Santa Clara Co., Calif.

American Museum Lectures

The American Museum of Natural History, 77th Street and Central Park West, New York City, announces the following course of four informal talks to be given on The Cultural Appreciation of Gems by Dr. Herbert P. Whitlock, Curator of Minerals and Gems.

March 21st—Gems, Ancient and Modern.

March 28th—The Art of the Lapidary.

April 4th—Chinese Carving in Jade and in other Decorative Stones.

April 11th—Russian Carving in the Decorative Stones and Japanese Carving in Ivory.

Each talk will begin at 4:00 P. M., and will be illustrated by lantern slides. There is no charge for admission.

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